# Elementary Matrices

An elementary matrix, $E$, is one that differs by $I_n$ by one row operation
Note:

1. Every $E$ is invertible
2. Every $E$ is square

For example,
$\begin{bmatrix} 1 & 0 & 0 \\ 2 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ is an elementary matrix as it differs from $I_3$ by one row operation($R_2 = R_2 - 2R_1$)

# What Do They Represent

Each elementary matrix represents a row operation.